

Leptin is synthesized and secreted by fat cells and plays a role in the signaling pathway that mediates energy balance. Plasma leptin levels are strongly correlated with body mass index and leptin is hypothesized to play a pathophysiological role in obesity (Lönngqvist F, Nordfors L, Schalling M: Leptin and its potential role in human obesity. J Intern Med 1999;245:643-652). Leptin may also be a marker for risk of cardiovascular disease (Wallace AM, McMahon AD, Packard CJ et al: Plasma leptin and the risk of cardiovascular disease in the West of Scotland Coronary Prevention Study (WOSCOPS). Circulation 2001;104:3052-3056). Leptin is measured using the Sensitive Human Leptin RIA Kit (product number SHL-81K) from Linco Research, Inc. (St. Charles, MO). The assay range is 0.05 to 10.0 ng/ml leptin in serum or plasma. The assay is highly specific for human leptin and shows minimal reactivity with mouse or rat leptin and no detectable reactivity with human insulin, glucagon or SRIF. The assay is a competitive RIA in which the concentration of leptin is determined by competition with <sup>125</sup>I-Human Leptin. The intra-assay CV is 3.7 – 7.5 % and the inter-assay CV is 3.2 – 8.9%.